# Copy f r the Elected Offic (EO/US) TENT COOPERATION TREAT

	From the INTERNATIONAL BUREAU	
PCT	То:	
NOTIFICATION OF THE RECORDING OF A CHANGE  (PCT Rule 92bis.1 and Administrative Instructions, Section 422)  Date of mailing (day/month/year)	HALLYBONE, Huw Carpmaels & Ransford 43 Bloomsbury Square London WC1A 2RA ROYAUME-UNI	
29 août 2001 (29.08.01)		
Applicant's or agent's file reference SAH01075WO	IMPORTANT NOTIFICATION	
International application No. PCT/GB00/03142	International filing date (day/month/year) 15 août 2000 (15.08.00)	
The following indications appeared on record concerning:      Abo inventor	X the agent the common representative	-
the applicant the inventor	the agent the common representative    State of Nationality   State of Residence	
Name and Address GILL JENNINGS & EVERY	State of Nationality	
Broadgate House 7 Eldon Street London EC2M 7LH	Telephone No. +44 20 7377 1377	
United Kingdom	Facsimile No. +44 20 7377 1310	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the	he following change has been recorded concerning:	
X the person X the name X the add		
Name and Address	State of Nationality State of Residence	
HALLYBONE, Huw Carpmaels & Ransford 43 Bloomsbury Square London WC1A 2RA	Telephone No.	
London WC1A 2KA United Kingdom	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
X the receiving Office	the designated Offices concerned	
the International Searching Authority	X the elected Offices concerned	
X the International Preliminary Examining Authority	other:	
The International Bureau of WIPO	Authorized officer	
34, chemin des Colombettes 1211 Geneva 20, Switzerland	Dominique DELMAS	
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38	



(PCT Article 18 and Rules 43 and 44)

pplicant's or agent's file reference FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.					
SAH01075W0	ACTION				
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)			
PCT/GB 00/03142	15/08/2000	17/08/1999			
Applicant					
THE TECHNOLOGY PARTNERSH	IP pic				
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this International Searching Auth Insmitted to the International Bureau.	nority and is transmitted to the applicant			
This International Search Report consists	of a total of sheets.				
	a copy of each prior art document cited in this	report.			
Basis of the report					
	nternational search was carried out on the bas ess otherwise indicated under this item.	sis of the international application in the			
the international search wa Authority (Rule 23.1(b)).	as carried out on the basis of a translation of th	he international application furnished to this			
b. With regard to any <b>nucleotide and</b> was carried out on the basis of the		ternational application, the international search			
1	nal application in written form.				
filed together with the inter	filed together with the international application in computer readable form.				
furnished subsequently to this Authority in written form.					
	furnished subsequently to this Authority in computer readble form.				
the statement that the sub- international application as	sequently furnished written sequence listing do filed has been furnished.	oes not go beyond the disclosure in the			
the statement that the infor furnished	mation recorded in computer readable form is	s identical to the written sequence listing has been			
2. Certain claims were foun	d unsearchable (See Box I).				
3. Unity of Invention is lack	ing (see Box II).				
4. With regard to the <b>title</b> ,					
the text is approved as sub	mitted by the applicant.				
the text has been establish	ed by this Authority to read as follows:				
SAMPLING/DISPENSING DE	VICE WITH PLUNGER AND HOUSI	ING SET ONTO PLUNGER			
5. With regard to the abstract,					
X the text is approved as sub	mitted by the applicant.				
	th text has been established, according to Rul 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.				
6. The figure of the drawing to be publis		1			
as suggested by the applica		None of th figures.			
X because th applicant failed	d to suggest a figur .	<del>-</del>			
because this figur better c	haracteriz s the invention.				



A. CLASSIFICATION OF SUBJECT MATERIAL TO THE SUBJECT M

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 B01L A61M G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 658 258 A (KNEER ROLAND ET AL) 19 August 1997 (1997-08-19) column 1, line 34 -column 1, line 48 column 1, line 62 -column 1, line 65 column 2, line 3 -column 2, line 9 column 2, line 17 -column 2, line 24 column 3, line 18 -column 3, line 36 column 4, line 41 -column 5, line 9 column 5, line 31 -column 5, line 40 column 5, line 46 -column 5, line 57 figures 1-8 -/	1,3,4,7

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
27 October 2000	03/11/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Koch, A

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<b>A</b>	
GB 00/03142	

C (Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to daim No.
+		
A	EP 0 443 227 A (ITO CORP) 28 August 1991 (1991-08-28) column 1, line 19 -column 1, line 52 column 2, line 31 -column 2, line 44 column 3, line 41 -column 4, line 6 column 5, line 32 -column 6, line 5 figures 1,5	1-3
A <sub>.</sub>	EP 0 226 867 A (HAMILTON BONADUZ AG) 1 July 1987 (1987-07-01) page 1, line 1 -page 2, line 2 page 2, line 19 -page 2, line 31 page 4, line 2 -page 4, line 24 page 5, line 12 -page 5, line 36 page 6, line 12 -page 6, line 25 page 11, line 18 -page 14, line 12 figures 1-10	1,8,9
X	US 3 766 785 A (SMERNOFF R) 23 October 1973 (1973-10-23) column 1, line 61 -column 2, line 38 column 4, line 15 -column 4, line 25 column 5, line 8 -column 5, line 51 figures 1,7,8	1,7
X	WO 99 34931 A (CARTESIAN TECHNOLOGY INC) 15 July 1999 (1999-07-15) page 10, line 18 -page 10, line 26 page 10, line 36 -page 11, line 3	1-4
Y X	page 11, line 14 -page 11, line 15 page 24, line 26 -page 24, line 34 figures 2,4,10	11 12
Y	WO 92 20778 A (KINDCONI PTY LIMITED) 26 November 1992 (1992-11-26) page 6, line 2 -page 6, line 32 figures 1,2	11
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	•	

International Application No Information on patent family members GB 00/03142 **Publication** Patent family **Publication** Patent document cited in search report date member(s) date US 5658258 Α 19-08-1997 DE 4433198 C 13-06-1996 EP 0701864 A 20-03-1996 EP 0443227 Α 28-08-1991 AU 617589 B 28-11-1991 4992690 A AU 05-09-1991 US 5063025 A 05-11-1991 EP 0226867 Α 01-07-1987 CH 671526 A 15-09-1989 74539 T AT 15-04-1992 1321985 A CA 07-09-1993 DE 3684767 A 14-05-1992 ES 2030656 T 16-11-1992 JP 2528297 B 28-08-1996 JP 62191049 A 21-08-1987 06-11-1990 US 4967604 A US 4830832 A 16-05-1989 US 3766785 Α 23-10-1973 CA 976929 A 28-10-1975 CH 336620 A CH 440768 A DE 2248573 A 12-04-1973 DE 1191140 B 2015747 A FR 30-04-1970 FR 2156019 A 25-05-1973 FR 1317488 A 08-05-1963 FR 1492062 A 22-11-1967 GB 1411424 A 22-10-1975 720204 A GB GB 815199 A GB 962356 A GB 1148241 A GB 1148242 A US 1747523 A 18-02-1930 US 3853012 A 10-12-1974 US 2517689 08-08-1950 US 2685800 10-08-1954 US 2724275 22-11-1955 US 2994349 A 01-08-1961 05-04-1966 US 3244009 A US 3285296 A 15-11-1966 3500689 A US 17-03-1970 US W0 9934931 Α 15-07-1999 6063339 A 16-05-2000 AU 2211999 A 26-07-1999 EP 1044072 A 18-10-2000 Α 26-11-1992 NONE WO 9220778

#### PATENT COOPERATION TREATY



From the

INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

HALLYBONE, Huw George Carpmaels & Ransford 43 Bloomsbury Square London WC1A 2RA GRANDE BRETAGNE



PCT CIC AM

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

. (PCT Rule 71.1)

Date of mailing (day/month/year)

29.11.2001

Applicant's or agent's file reference P027801WO:HGH/GJS

International application No.

PCT/GB00/03142

International filing date (day/month/year)

15/08/2000

Priority date (day/month/year)

IMPORTANT NOTIFICATION

17/08/1999

Applicant

THE TECHNOLOGY PARTNERSHIP plc et al.

- 1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
- 2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
- 3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

European Patent Office D-80298 Munich

Tel. +49 89 2399 - 0 Tx: 523656 epmu d

Fax: +49 89 2399 - 4465

Authorized officer

Ipinazar, P

Tel.+49 89 2399-8131





# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

# (PCT Article 36 and Rule 70)

Applicant's or agent's file reference P027801WO:HGH/GJS	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)			
International application No.	International filing date (day/month	/year) Priority date (day/month/year)			
PCT/GB00/03142	15/08/2000	17/08/1999			
International Patent Classification (IPC) or national classification and IPC B01L3/02					
Applicant	1				
THE TECHNOLOGY PARTNERSHI	IP plc et al.				
This international preliminary examinand is transmitted to the applicant action.	nation report has been prepared coording to Article 36.	by this International Preliminary Examining Authority			
2. This REPORT consists of a total of	5 sheets, including this cover sl	heet.			
been amended and are the basi (see Rule 70.16 and Section 60					
3. This report contains indications relat					
I ☑ Basis of the report					
Ⅱ □ Priority					
III   Non-establishment of or	pinion with regard to novelty, inv	ventive step and industrial applicability			
IV ☐ Lack of unity of invention					
V 🛛 Reasoned statement un citations and explanatio	nder Article 35(2) with regard to a ns suporting such statement	novelty, inventive step or industrial applicability;			
VI   Certain documents cite	d				
VII   Certain defects in the in	ternational application				
VIII   Certain observations on	the international application				
Date of submission of the demand	Date of	completion of this report			
05/03/2001	29.11.20	001			
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d  Authorized officer  Skowronski, M					





# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03142

l. Basis	f the	report
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1.	the i	With regard to the <b>elements</b> of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):  Description, pages:				
	1-10	)	as originally filed			
	Clai	ms, No.:				
	1-14	1	as received on	05/11/2001	with letter of	02/11/2001
	Dra	wings, sheets:				
	1/6-	6/6	as originally filed			
2.	With	n regard to the <b>lan</b> guage in which the	guage, all the elements international applicatio	s marked above were a n was filed, unless oth	available or furni erwise indicated	shed to this Authority in the under this item.
	The	se elements were	available or furnished t	o this Authority in the	following langua	ge: , which is:
		the language of a	translation furnished fo	or the purposes of the	international sea	arch (under Rule 23.1(b)).
			oublication of the interna			
			translation furnished fo			nary examination (under Rule
3.	With inte	h regard to any <b>nu</b> rnational prelimina	cleotide and/or amino ary examination was ca	acid sequence disclerried out on the basis	osed in the interr of the sequence	national application, the listing:
		contained in the i	nternational application	in written form.		
		filed together with	n the international appli	cation in computer rea	dable form.	
		furnished subseq	uently to this Authority	in written form.		
			uently to this Authority			
		the international	application as filed has	been furnished.		ot go beyond the disclosure in
		The statement th listing has been f		ded in computer read	able form is iden	tical to the written sequence
4	. The	e amendments hav	ve resulted in the cance	llation of:		
		the description,	pages:			
		the claims,	Nos.:			

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03142

		the drawings,	sheets:
5. 🗆		This report has been considered to go bey	established as if (some of) the amendments had not been made, since they have been ond the disclosure as filed (Rule 70.2(c)):
		(Any replacement sh report.)	eet containing such amendments must be referred to under item 1 and annexed to this

- 6. Additional observations, if necessary:
- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- 1. Statement

Novelty (N)

Yes: Claims 1-8
No: Claims 9-14

Inventive step (IS)

Yes: Claims 1-8
No: Claims 9-14

Industrial applicability (IA)

Yes: Claims 1-14
No: Claims

2. Citations and explanations see separate sheet

#### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

s e separate sheet

**EXAMINATION REPORT - SEPARATE SHEET** 

Following documents have been cited in the international search report:

D1: US-A-5 658 258 (KNEER ROLAND ET AL) 19 August 1997 (1997-08-19)

D2: EP-A-0 443 227 (ITO CORP) 28 August 1991 (1991-08-28)

D3: EP-A-0 226 867 (HAMILTON BONADUZ AG) 1 July 1987 (1987-07-01)

D4: US-A-3 766 785 (SMERNOFF R) 23 October 1973 (1973-10-23)

D5: WO 99 34931 A (CARTESIAN TECHNOLOGY INC) 15 July 1999 (1999-07-

15)

D6: WO 92 20778 A (KINDCONI PTY LIMITED) 26 November 1992 (1992-11-

26)

#### Item VIII

1.1 As explained below, some of the features in the apparatus claims 9-14 relate to a method of producing the device rather than clearly defining the device in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

Claim 9 includes by relating to claim 1 the method step of having the housing formed by moulding and setting the second material onto the surface of the plunger, which do not result in any technical feature of the device.

Consequently, the subject-matter of claims 9-14 have only be examined for the specific technical feature present in the device claims.

#### Item V

Claims 1-8: Non of the prior art documents disclose the method of making a 2.1 positive displacement type substance sampling and dispensing device, comprising moulding and setting a second material around a central plunger formed of a first drawn material, such that the second material forms a barrel corresponding to the outer surface of the plunger.

The method of claim 1 improves the production of syringes. There is no indication in the given prior art to use the method of claim 1, so that the subject-matter of claim 1 seems to fulfil the requirements of Article 33 PCT.

- 2.2 Claim 9-14: The description of the present application presents a medical syringes having rigid polystyrene bores and rubber piston ends, or stiff polypropylene pistons which a compliant thin-walled bore as a prior art device. This very simple devices are already novelty destroying for the technical features given in device claim 9, so that their subject-matter is not new in the sense of Article 33(2) PCT.
- 2.3 Further, do **claims 10-14** contain technical features which are obvious for the person skilled in the art, so that their subject-matter is not new in the sense of Article 33(2) PCT

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#### CLAIMS

- 1. A positive displacement type substance sampling and dispensing device comprising:
- a central plunger formed from a first material; and a plunger housing formed from a second material the housing being formed by moulding and setting the second material on to the surface of the plunger so that the plunger can slide in the housing to draw a substance into it.
  - 2. A device according to claim 1, wherein the plunger is formed from drawn wire or extruded metal.
- 15 3. A device according to claim 1, wherein the first material is one of metal, plastic and ceramic.
  - 4. A device according to any one of the preceding claims, wherein the second material is plastics material.
  - 5. A device according to any one of the preceding claims, wherein the plunger is actively cooled during moulding.
- A device according to any one of the preceding claims,
   wherein the first material has a higher thermal conductivity and/or specific heat capacity than the second material.
- A device according to any one of the preceding claims,
   wherein the housing is moulded onto the plunger by one of injection moulding, welding, coextrusion casting and dip coating.
- 8. A device according to any preceding claim, attached to a flexible strip, to which further devices are attached in use.

WO 01/12329

- 9. A device according to any claim 8, wherein the strip has sprocket holes to drive and align the pipettes.
- 10. A device according to any preceding claim, wherein the housing is formed so that at one end of the device there is provided a frangible tip which can be removed before use.
- 11. A device according to any of claims 1 to 11, wherein the device is formed so that it has a heat sealable tip.
- 12. A device according to any proceeding claim comprising plural plungers arranged on different axes and each sliding within a different region of the housing, the different regions of the housing being joined at a central common core adjacent to an aperture.

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From the INTERNATIONAL BUREAU

PCT

#### NOTIFICATION CONCERNING SUBMISSION OR TRANSMITTAL OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

GILL JENNINGS & EVERY Broadgate House 7 Eldon Street London EC2M 7LH ROYAUME-UNI

IMPORTANT NOTIFICATION
filing date (day/month/year) ust 2000 (15.08.00)
(day/month/year) ust 1999 (17.08.99)

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the
  International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise
  indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority
  document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- 2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- 3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- 4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date

Priority application No.

Country or regional Office or PCT receiving Office

Date of receipt of priority document

17 Augu 1999 (17.08.99)

99306463.3

ΕP

17 Octo 2000 (17.10.00)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

Taïeb Akremi



Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

PCI

NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

GILL JENNINGS & EVER **Broadgate House** 7 Eldon Street London EC2M 7LH **ROYAUME-UNI** 

IMPORTANT NOTICE

Date of mailing (day/month/year)

22 February 2001 (22.02.01)

Applicant's or agent's file reference

SAH01075WO International application No.

PCT/GB00/03142

International filing date (day/month/year)

15 August 2000 (15.08.00)

Priority date (day/month/year)

17 August 1999 (17.08.99)

Applicant

THE TECHNOLOGY PARTNERSHIP PLC et al

Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice: AU, KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE,AG,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CR,CU,CZ,DE,DK,DM,DZ,EA,EE,EP,ES, FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK, MN,MW,MX,MZ,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU, The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 22 February 2001 (22.02.01) under No. WO 01/12329

#### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

#### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

J. Zahra

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38



The deniand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent with the one chosen by the applicant. The full name or two-letter code of that Atthority may be judicated by the applicant on the line below:

IPEA/\_\_\_\_\_

### PCT

**CHAPTER II** 

#### **DEMAND**

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only				
Identification of IPEA   IPEA/EF	٠.	Date of receipt of D	05-03-2001	
Box No. I IDENTIFICATION OF T	HE INTERNATIONAL	APPLICATION	Applicant's or agent's file reference SAH01075WO	
International application No.	International filing date	(day/month/year)	(Earliest) Priority date (day/month/year)	
PCT/GB00/03142	15/08/00		17/08/99	
Title of invention		<u> </u>		
Sampling/Dispensing Device				
Box No. II APPLICANT(S)	0.0			
Name and address: (Family name followed by the first factor of the faddress must include polytopic factor of the faddress must include polytopic factor of the faddress must include polytopic factor of the faddress fa	given name; for a legal entity, ostal code and name of country,	full official designation.	Telephone No.;	
The Technology Partnership Melbourn Science Park Cambridge Road	plc		Facsimile No.:	
Melbourn Royston, Herts SG8 6EE			Teleprinter No.:	
State (that is, country) of nationality:	+ 0.0	State (that is, count	ry) of residence:	
British * GB United Kingdom				
Name and address: (Family name followed by given name: for a legal entity, full official designation. The address must include postal code and name of country.)  EDWARDS, Richard Kelby 7 Leys Walk Hauxton Cambridge CB2 5HZ United Kingdom				
State (that is, country) of nationality:		State (that is, count	ry) of residence:	
- <del>B</del> ritieh	* GB		United Kingdom	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of cauntry.)  CASSELLS, John c/o The Technology Partnership plc Melbourn Science Park Cambridge Road Melbourn, Royston Herts SG8 6EE				
State (that is, country) of nationality:		State (that is, country,	y) of residence:	
State (that is, country) of hallohality.  British	* GB		United Kingdom	
Further applicants are indicated on a continuation sheet.				

Form PCT/IPEA/401 (first sheet) (July 1998; reprint July 2000)

See Notes to the demand form



Sheet No.

PCT/GR00/03142

•				PC1/GB00/03142
Continuation of Box No. II	APPLICAN	IT(S)		
If none of	the following s	ub-boxes is used, ti	his sheet should not be inc	cluded in the demand.
Name and address: (Family name MOUNTENEY, Nicholas 30A Owl Way Hartford Huntingdon Cambridgeshire United Kingdom		name; for a legal entity,	full official designation. The addi	ress must include postal code and name of country.)
State (that is, country) of nation	nality:	* OD	State (that is, country) of	residence:
	British	* GB		United Kingdom
Name and address: (Family name AVISON, Gerald 59 Victoria Park Cambridge CB4 3EJ United Kingdom	: fallowed by given n	ame; for a legal entity, j	full official designation. The addi	ress must include postal code and name of country.)
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Form PCT/IPEA/401 (continuation sheet) (July 1998; reprint July 2000)

See Notes to the demand form



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	TENT COOPERA

From the International Preliminary Examining Authority PCT To: GILL JENNINGS & EVERY NOTIFICATION OF RECEIPT RECEIVED OF DEMAND BY COMPETENT INTERNATIONAL Broadgate House PRELIMINARY EXAMINING AUTHORITY 7 Eldon Street LONDON EC2M 7LH 26 MAR 2001 (PCT Rules 59.3(e) and 61.1(b), first sentence GRANDE BRETAGNE and Administrative Instructions, Section 601(a)) **GILL JENNINGS & EVER** Date of mailing 2 2. 03. 01 (day|month|year) Applicant's or agent's file reference IMPORTANT NOTIFICATION SAH01075W0 International filing date (day/month/year) Priority date (day/month/year) International application No. 17/08/1999 15/08/2000 PCT/GB 00/03142 Applicant PARTNERSHIP plc et al. THE TECHNOLOGY The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the 1. date of receipt of the demand for international preliminary examination of the international application: 05/03/2001 This date of receipt is: 2. the actual date of receipt of the demand by this Authority (Rule 61.1(b)). the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)). the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections. ATTENTION: That date of receipt is AFTER the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the PCT Applicant's Guide, Volume II. 3. Pages of IPEA 1401 + (If applicable) This notification confirms the information given by telephone, facsimile transmission or in person Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau. Authorized officer Name and mailing address of the IPEA/

European Patent Office

D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465

FALCO M

Tel. (+49-89) 2399-7276



PATENT COOPERATION TREATY

<b>M</b>					
-9					
From the:	TIONA	L PRELIMINARY EXAMINI	NG AUTHORITY		
То:		•"			PCT
GILL JE	NNIN	GS & EVERY			
Broadga	ate Ho	ouse ,		51 F	
7 Eldon		t 2M 7LH			WRITTEN OPINION
		ETAGNE	GILLJENNINGS &	EVERY	(DOT Date 60)
J		<u>:</u>	ALL DESCRIPTIONS OF THE PARTY O	man department on resident. Next	(PCT Rule 66)
		(U) (V)			
				Date of mailing	26.07.2001
<u> </u>				(day/month/year)	20.07.2001
Applicant'	s or age	ent's file reference		REPLY DUE	within 3 month(s) from the above date of mailing
SAH010	75W	0			Tom the above date of maining
International application No. International filing date (day/month/year) Priority date (day/month/year)					
PCT/GB00/03142 15/08/2000 17/08/1999					
International Patent Classification (IPC) or both national classification and IPC					
B01L3/02					
Applicant					
THE TECHNOLOGY PARTNERSHIP plc et al.					
1. This written opinion is the first drawn up by this International Preliminary Examining Authority.					
2. This opinion contains indications relating to the following items:					
	∣ ⊠ Basis of the opinion				
]	II Priority				
III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability					
IV					
V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
V	VI ☐ Certain document cited				
VII	VII Certain defects in the international application				
VIII		Certain observations or	n the international applic	cation	
3. The	applic	ant is hereby invited to r	reply to this opinion.		
Whe	n?	See the time limit indicated request this Authority to gr	l above. The applicant may ant an extension, see Rule	, before the expiration 66.2(d).	of that time limit,
How	?	By submitting a written rep For the form and the langu	ly, accompanied, where ap age of the amendments, se	propriate, by amendmo ee Rules 66.8 and 66.9	ents, according to Rule 66.3.
Also	):	For an additional opportuni	ity to submit amendments, on to consider amendment	see Rule 66.4. s and/or arguments, se	ee Rule 66.4 bis.

Name and mailing address of the international preliminary examining authority:



European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465

The final date by which the international preliminary

For an informal communication with the examiner, see Rule 66.6.

examination report must be established according to Rule 69.2 is: 17/12/2001.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

Authorized officer / Examiner

Skowronski, M

Formalities officer (incl. extension of time limits)

Ipinazar, P

Telephone No. +49 89 2399 8131





Pacie	of th	ni	nion

		•	
1.	With the	regard to the <b>eler</b> receiving Office in	nents of the international application (Replacement sheets which have been furnished to response to an invitation under Article 14 are referred to in this opinion as "originally filed"):
	Des	cription, pages:	
	1-10	)	as originally filed
	Clai	ms, No.:	
	1-12	2	as originally filed
	Dra	wings, sheets:	
	1/6-	6/6	as originally filed
2.	With lang	n regard to the language in which the	juage, all the elements marked above were available or furnished to this Authority in the international application was filed, unless otherwise indicated under this item.
	The	se elements were a	available or furnished to this Authority in the following language: , which is:
		the language of a	translation furnished for the purposes of the international search (under Rule 23.1(b)).
		the language of pu	ublication of the international application (under Rule 48.3(b)).
		the language of a 55.2 and/or 55.3).	translation furnished for the purposes of international preliminary examination (under Rule
3.	With	n regard to any <b>nuc</b> rnational preliminar	leotide and/or amino acid sequence disclosed in the international application, the yexamination was carried out on the basis of the sequence listing:
		contained in the in	ternational application in written form.
		filed together with	the international application in computer readable form.
		furnished subsequ	ently to this Authority in written form.
		furnished subsequ	ently to this Authority in computer readable form.
		The statement that the international ap	t the subsequently furnished written sequence listing does not go beyond the disclosure in oplication as filed has been furnished.
		The statement that listing has been fu	t the information recorded in computer readable form is identical to the written sequence rnished.
4.	The	amendments have	resulted in the cancellation of:
		the description,	pages:

Nos.:

 $\square$  the claims,

### WRITTEN OPINION

		the drawings,	sheets:		
5.			established as if (some of) the amendments had not been made, since rond the disclosure as filed (Rule 70.2(c)):	they have	been
		(Any replacement sh report.)	eet containing such amendments must be referred to under item 1 and a	annexed to	this
6.	Add	itional observations, if	f necessary:		

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

1-12: No Claims

Inventive step (IS)

Claims 1-12: No

Industrial applicability (IA)

Claims

1-12: Yes

2. Citations and explanations see separate sheet

#### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

separate sheet

Reference is made to the following documents:

D1: US-A-5 658 258 (KNEER ROLAND ET AL) 19 August 1997 (1997-08-19)

D2: EP-A-0 443 227 (ITO CORP) 28 August 1991 (1991-08-28)

D3: EP-A-0 226 867 (HAMILTON BONADUZ AG) 1 July 1987 (1987-07-01)

D4: US-A-3 766 785 (SMERNOFF R) 23 October 1973 (1973-10-23)

D5: WO 99 34931 A (CARTESIAN TECHNOLOGY INC) 15 July 1999 (1999-07-15)

D6: WO 92 20778 A (KINDCONI PTY LIMITED) 26 November 1992 (1992-11-26)

#### Item VIII

1.1 As explained below, some of the features in the apparatus **claims 1, 2, 5 and 7** relate to a method of producing the device rather than clearly defining the device in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

Claim 1, for example, includes the method step of having the housing formed by moulding and setting the second material onto the surface of the plunger, which do not result in any technical feature of the device.

If the applicant is, however, convinced that such a method of producing the device has an influence on the technical features of the sampling and dispensing device he is invited to specify them in terms of such technical features.

The same objections can be raised mutatis-mutandis on the subject-matter of claims 2, 5 and 7.

Consequently, the subject-matter of claims 1, 2, 5 and 7 have only be examined for the technical feature present in the claim, whereas the characterising features of claims 5 and 7 only contain functional features.

#### Item V

2.1 Claim 1, 3, 4, 5 and 7: The description of the present application presents a

medical syringes having rigid polystyrene bores and rubber piston ends, or stiff polypropylene pistons which a compliant thin-walled bore as a prior art device. This very simple devices are already novelty destroying for the technical features given in device claims 1, 3, 4, 5 and 7, so that their subject-matter is not new in the sense of Article 33(2) PCT.

- 2.2 Further, do claims 2, 6 and 8-12 contain technical features which is obvious for the person skilled in the art, so that their subject-matter is not new in the sense of Article 33(2) PCT
- 2.3 At least some of the objections raised on the device claims are such that there appears to be no possibility of overcoming them by amendment.

The applicant is advised to file an independent claim which describes the method of producing a sampling and dispensing device. In this case the applicant should indicate in the letter of reply the difference of the subject-matter of the new claim vis-à-vis the state of the art represented by documents D1-D6 and the significance thereof using the problem-solution approach.

D1, for example, shows a method of producing an applicator where the cylinder, the piston and the strap are made in one piece, preferably in an injection-moulding process (column 2, 16-24).



#### REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

PCT/GB 0 / 0 3 1 4 2 International Application No.				
15 AUGUST 2000 15/08/00				
United Kingdom Patent Office				
Name of receiving Office and "PCT International Application"				

		(if desired)(12 characters ma		
-	Box No. I TITLE OF INVENTION Sampling/Dispensing Device			
ļ	Box No. II APPLICANT			
	Name and address: (Family name followed by given name; for a designation. The address must include postal	X This person is also inventor.		
	The Technology Partnership plc Melbourn Science Park Cambridge Road		Telephone No.	
	Melbourn Royston Herts SG8 6EE		Facsimile No.	
	United Kingdom		Teleprinter No.	
a	State (that is, country) of nationality: (British )	State (that is, country)	United Kingdom	
OKB	This person is applicant for the purposes of:  all designated X all designated the United		e United States  f America only  the States indicated in the Supplemental Box	
3140	Box No. III FURTHER APPLICANTS AND/OR (FURTHER) INVENTORS			
	Name and address: (Family name followed by given name; for designation. The address must include posta.	a legal entity, full official l code and name of country.)	This person is:	
	EDWARDS, Richard Kelby 7 Leys Walk		applicant only	
	Hauxton Cambridge		X applicant and inventor	
	CB2 5HZ United Kingdom		inventor only (if this check-box is marked, do not fill in below.)	
	State (that is, country) of nationality: British	State (that is, country,	United Kingdom	
	This person is applicant for the purposes of:  all designated the United the United		ne United States f America only the States indicated in the Supplemental Box	
	X Further applicants and/or (further) inventors are indicate	d on a continuation sheet.		
	Box No. IV AGENT OR COMMON REPRESENTAT	IVE; OR ADDRESS FO	OR CORRESPONDENCE	
	The person identified below is hereby/has been appointed to a of the applicant(s) before the competent International Authorit	act on behalf ties as:		
	Name and address: (Family name followed by given name; for designation. The address must include poster	a legal entity, full official al code and name of country.)	Telephone No. +44 20 7377 1377	
	Gill Jennings & Every			
	Broadgate House 7 Eldon Street		Facsimile No. +44 20 7377 1310	
	London			
	EC2M 7LH		Teleprinter No.	
	United Kingdom		(051) 22765 GILPAT	
	Address for correspondence: Mark this check-box will space above is used instead to indicate a special address.	here no agent or common ress to which corresponden	representative is/has been appointed and u ce should be sent.	

. [	Ci auation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER	) INVENTOR(S)
,	If none of the wing sub-boxes is used, this sheet is not to	included in the request.
aded Rojgb		This person is:  applicant only  X applicant and inventor  inventor only (if this check-box is marked, do not fill in below.)  of residence:  United Kingdom  e United States America only the States indicated in the Supplemental Box  This person is:
DD BELETED BOIGB	MOUNTENEY, Nicholas Ian 30A Owl Way Hartford Huntingdon Cambridgeshire United Kingdom	applicant only  X applicant and inventor  inventor only (if this check-box is marked, do not fill in below.)
	State (that is, country) of nationality:  GB: CB: CB: CB: CB: CB: CB: CB: CB: CB: C	United Kingdom  e United States the States indicated in the Supplemental Box  This person is:  applicant only  X applicant and inventor  inventor only (if this check-box is marked, do not fill in below.)
		United Kingdom  The United States only the States indicated in the Supplemental Box  This person is:  applicant only  applicant and inventor  inventor only (if this check-box is marked, do not fill in below.)
	State (that is, country) of nationality: State (that is, country	o) of residence:
		he United States of America only the States indicated in the Supplemental Box
	Further applicants and/or (further) inventors are indicated on another continuation	sheet.

Filing date of earlier application (day/month/year)  (1) 17/08/19  (2) August 199  (3) The receiving Office of the earlier application for the Protection for the Protection of Internation of the earlier application of the Internation of the International application of the International application (excluding ence listing part) in the Internation (excluding ence listing part) in the Internation of the International application (excluding ence listing part) in the Internation of the Internation (excluding ence listing part) in the Internation of the Internation of the International application (excluding ence listing part) in the International application (excluding ence listing e	ice is requestication(s) (or esent internation of Industrial Searching and Searching internation two-letter contains the internation of the internation of the internation in the intern	Number lier application  99306463.  sted to prepare and only if the earlier ap actional application ARIPO application, strial Property for w AL SEARCHING Authority (ISA) ing Authorities are inal search, indicate ode may be used):  LANGUAGE OF ins This interm  1.  in fee 2.  in sep	transmit pplication is the R it is man which the GAUTI Requisearch Date  FILIN national a	national application country  (EP) (A)  to the International n was filed with the ecciving Office) ide ideatory to indicate in earlier application w HORITY est to use results of in has been carried out (day/month/year)  G application is zecome ion sheet	Bureau Office w ntified at the Supp as filed (	which for the bove as item(s):  elemental Box at least of Rule 4.10(b)(ii)). See to be search; reference to be equested from the Interview	on is:  international ap receiving (  one country party Supplemental Box that search (if rnational Searchic	oplication: Office  to the Paris x.  an earlier ing Authority)		
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# PCT

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference		See Notification of Transmittal of International		
P027801WO:HGH/GJS	FOR FURTHER ACTION	Preliminary Examination Report (Form PCT/IPEA/416)		
International application No.	International filing date (day/month			
PCT/GB00/03142	15/08/2000	17/08/1999		
International Patent Classification (IPC) o B01L3/02	r national classification and IPC			
Applicant THE TECHNOLOGY PARTNER	SHIP plc et al.			
This international preliminary examples and is transmitted to the application.	camination report has been prepared int according to Article 36.	by this International Preliminary Examining Authority		
2. This REPORT consists of a total	of 5 sheets, including this cover s	heet.		
been amended and are the	nied by ANNEXES, i.e. sheets of the basis for this report and/or sheets on n 607 of the Administrative Instructi	e description, claims and/or drawings which hav containing rectifications made before this Authority cons under the PCT).		
These annexes consist of a total of 2 sheets.				
This report contains indications	relating to the following items:			
I ⊠ Basis of the report				
II ☐ Priority				
III   Non-establishment	of opinion with regard to novelty, in	ventive step and industrial applicability		
IV   Lack of unity of inve				
V A Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement				
VI ☐ Certain documents cited				
VII   Certain defects in t				
VIII 🛛 Certain observation	ns on the international application			
Date of submission of the demand	Date of	completion of this report		
05/03/2001	29.11.2	0001		
Name and mailing address of the internal preliminary examining authority:  European Patent Office		zed officer		
European Patent Office D-80298 Munich Skowronski, M				
Tel. +49 89 2399 - 0 Tx: 52				

International application No. PCT/GB00/03142

#### I. Basis f the report

1.	With regard to the <b>elements</b> of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)): <b>Description, pages:</b>											
	1-10	)	as originally filed									
	Claims, No.:											
	1-14		as received on	05/11/200	with let	ter of	02/11/2001					
	Drawings, sheets:											
	1/6-	6/6	as originally filed									
2.	With lang	ed to this Authority inder this item.	n the									
	These elements were available or furnished to this Authority in the following language: , which is:											
		the language of a	translation furnished for	the purposes of the	internatio	nal search	under Rule 23.1(t	o)).				
	☐ the language of publication of the international application (under Rule 48.3(b)).											
		the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).										
3.	. With regard to any <b>nucleotide and/or amino acid sequence</b> disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:											
		☐ contained in the international application in written form.										
		illed together with the international application in computer readable form.										
		☐ furnished subsequently to this Authority in written form.										
		furnished subsequently to this Authority in computer readable form.										
	☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure the international application as filed has been furnished.											
	☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.											
4.	. The amendments have resulted in the cancellation of:											
		the description,	pages:									
		the claims,	Nos.:									

International application No. PCT/GB00/03142

		the drawings,	sheets:							
5.	5. This report has been established as if (some of) the amendments had not been made, since they considered to go beyond the disclosure as filed (Rule 70.2(c)):									
		(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to th report.)								
6.	Add	ditional observations, if necessary:								
V.	Rea	easoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; ations and explanations supporting such statement								
1.	Stat	tement								
	Nov	velty (N)	Yes: No:	Claims Claims	· -					
	Inve	entive step (IS)	Yes: No:	Claims Claims						
	Indi	ustrial applicability (IA	) Yes: No:	Claims Claims						

#### VIII. Certain observations on the international application

2. Citations and explanations see separate sheet

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made: see separate sheet

Following documents have been cited in the international search report:

- D1: US-A-5 658 258 (KNEER ROLAND ET AL) 19 August 1997 (1997-08-19)
- D2: EP-A-0 443 227 (ITO CORP) 28 August 1991 (1991-08-28)
- D3: EP-A-0 226 867 (HAMILTON BONADUZ AG) 1 July 1987 (1987-07-01)
- D4: US-A-3 766 785 (SMERNOFF R) 23 October 1973 (1973-10-23)
- D5: WO 99 34931 A (CARTESIAN TECHNOLOGY INC) 15 July 1999 (1999-07-
- 15)
- D6: WO 92 20778 A (KINDCONI PTY LIMITED) 26 November 1992 (1992-11-
- 26)

#### Item VIII

1.1 As explained below, some of the features in the apparatus claims 9-14 relate to a method of producing the device rather than clearly defining the device in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

Claim 9 includes by relating to claim 1 the method step of having the housing formed by moulding and setting the second material onto the surface of the plunger, which do not result in any technical feature of the device.

Consequently, the subject-matter of claims 9-14 have only be examined for the specific technical feature present in the device claims.

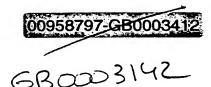
#### Item V

- Claims 1-8: Non of the prior art documents disclose the method of making a 2.1 positive displacement type substance sampling and dispensing device, comprising moulding and setting a second material around a central plunger formed of a first drawn material, such that the second material forms a barrel corresponding to the outer surface of the plunger.
  - The method of claim 1 improves the production of syringes. There is no indication in the given prior art to use the method of claim 1, so that the subject-matter of claim 1 seems to fulfil the requirements of Article 33 PCT.

- 2.2 Claim 9-14: The description of the present application presents a medical syringes having rigid polystyrene bores and rubber piston ends, or stiff polypropylene pistons which a compliant thin-walled bore as a prior art device. This very simple devices are already novelty destroying for the technical features given in device claim 9, so that their subject-matter is not new in the sense of Article 33(2) PCT.
- 2.3 Further, do claims 10-14 contain technical features which are obvious for the person skilled in the art, so that their subject-matter is not new in the sense of Article 33(2) PCT







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#### **CLAIMS**

- A method of making a positive displacement type substance sampling and dispensing device, comprising moulding and setting a second material around a
   central plunger formed of a first drawn material, such that the second material forms a barrel corresponding to the outer surface of the plunger.
  - 2. A method according to claim 1, wherein the first drawn material is drawn wire or extruded metal.

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- 3. A method according to claim 1, wherein the first drawn material is one of metal, plastic and ceramic.
- 4. A method according to any one of the preceding claims, wherein the second material is plastics material.
  - 5. A method according to any one of the preceding claims, wherein the first drawn material is actively cooled during moulding.
- 20 6. A method according to any one of the preceding claims, wherein the first drawn material has a higher thermal conductivity and/or specific heat capacity than the second material.
- A method according to any one of the preceding claims, wherein the step of
   moulding comprises one of injection moulding, welding, coextrusion casting and
   dip coating.
  - 8. A method according to any preceding claim, wherein the barrel is formed to be a uniform cylinder.
  - 9. A positive displacement type substance sampling and dispensing device made in accordance with the method of any preceding claim.

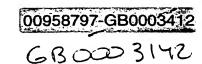


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- 10. A device according to claim 9, attached to a flexible strip, to which further devices are attached in use.
- 11. A device according to claim 10, wherein the strip has sprocket holes to drive and align the devices attached thereto.
  - 12. A device according to any of claims 9 to 11, wherein the moulded and set first material forms a housing, which is provided, at one end thereof, with a frangible tip which can be removed before use.

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- 13. A device according to any of claims 9 to 11, wherein the device is formed so that it has a heat sealable tip.
- 14. A device according to any of claims 9 to 13 comprising plural plungers arranged on different axes and each sliding within a different region of the moulded and set second material, the different regions being joined at a central common core adjacent to an aperture.